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Among many problems of graduate education in the US, one of the most pressing is the question of whether there should be composite or separate faculties for the graduate and undergraduate programs. Widespread use of graduate assistants has caused equal concern although there is little doubt that their participation in all aspects of research and instruction will continue. The relationship of undergraduate to graduate education is changing, and as knowledge increases, graduate programs are becoming more specialized. A response to the problems of smaller institutions is the development of consortia. The appropriate role and authority of the graduate dean is a topic of attention in the literature and 3 patterns have emerged--the dean as clerk, the dean as scholar, the dean as scholar-administrator. A comparable administrative question concerns the organization requied to discharge functions within departments. Many factors --the draft, job requirements, obsolescence of technical knowledge-- account for a greater number of students than formerly and their conditions of life vary considerably. There is also great diversity in the requirements for graduate degrees and few trends are discernible. In the determination of what degrees fo offer, there is a growing need for flexibility and relevant standards. New and concrete data must be provided for the solution of many of the problems now causing controversy among those who seek to improve graduate education. A lengthy annotated bibliography is included. (JS)

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NEW DIMENSIONS
in Higher Education

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April, 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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by George Bruce Dearing
G. Peter Lederer

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U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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FOREWORD

(If and when this manuscript is published for general distribution, the Editor will gladly prepare an appropriate Foreword for the wider audience.)

HIGHLIGHTS

1. One of the most pressing issues in relation to graduate education is the question of whether there should be a composite faculty for all levels of instruction or separate faculties for the graduate and undergraduate programs.

2. As knowledge increases and the total educational system improves, subjects formerly taught in graduate school become a part of the undergraduate offering, subjects formerly a part of college instruction have been introduced into the high school curriculum, and graduate programs become increasingly specialized within the disciplines.

3. The history of the graduate deanship reveals three fairly distinct patterns: (1) the dean who is there primarily because of his scholarly reputation; (2) the dean whose major responsibility is the clerical and service function -- a clerkship for the graduate faculty; or (3) the dean who is a scholar-administrator with an increasing responsibility for genuine educational and institutional leadership. The current trend seems to be in the direction of the third pattern.

4. In such matters as foreign language requirements, the dissertation, and length of required residence, the literature shows great diversity in institutional practice and few discernible trends. Such issues are under constant review, but the debates are supported mainly by strong personal opinions rather than factual studies.

5. There is a growing need for increased flexibility and for standards of relevance in the determination of graduate degrees to be offered.

6. There is a great need for more extensive and intensive research that focuses specifically on the various aspects of graduate education. New and concrete data must be brought to bear on the solution of the many problems, issues, and areas of contention confronting those who would improve American graduate education.

I. RELATIONSHIPS OF GRADUATE TO UNDERGRADUATE PROGRAMS

Graduate education in the United States, by which is normally meant all formal education beyond the baccalaureate level, has been under intense scrutiny for some time. Well-established graduate programs have been examining themselves in the light of widespread assertions that course requirements are archaic, that time requirements are unreasonable and unrealistic, and that many of the ills of undergraduate education, particularly the alleged "flight from teaching," are chargeable to attitudes and practices of the established graduate schools. At the same time, developing institutions are establishing or significantly augmenting programs of graduate study. In planning their own futures, undergraduate institutions are anxiously inquiring whether they can afford to develop a graduate program, or whether they can indeed survive and prosper in the absence of an associated graduate program. The shortage of Ph.D.'s to serve not only in education but in industry and government has been given much attention, and a lively controversy continues over whether the situation will be alleviated or exacerbated over the next decade or two.

Among the most pressing issues on many campuses is the question of whether there should be a composite faculty for all levels of

instruction or separate faculties for the graduate program and the undergraduate program. Many institutions, particularly those with a long-standing commitment to undergraduate education, are unwilling to see the faculty separated. They prefer to have the senior professors available for instruction of undergraduates, and to bring to bear the insights of the total faculty on educational problems which transcend the division between levels of instruction. At the same time, graduate deans and graduate professors are restive at having to submit matters of special interest in the graduate program to the judgment of colleagues not directly involved. Moreover, as institutions grow in size, a composite faculty tends to become unwieldy. Attention to this problem is given in many of the accounts of graduate education listed in the annotated bibliography which follows.

The widespread use of graduate assistants for various functions in undergraduate education has caused equally widespread concern. Undergraduate students often protest that much of their instruction is entrusted to often untrained and little supervised subinstructors who are candidates for graduate degrees at the same institution, while the fully qualified professors are preoccupied with graduate instruction and research. Defenders of this system counter with the argument that many of the functions of undergraduate instruction, such as the supervision of laboratories, the grading of tests, the reading of exercises and essays, and the conduct of discussion sections, are an inefficient

use of professorial time and are more appropriately delegated to apprentice teacher-scholars. In some instances, this kind of experience is closely supervised and is regarded as an essential aspect of the education of the graduate student, particularly if he is planning to enter the teaching profession. The subsidization of graduate education appears to be a generally accepted practice, and the graduate assistantship and graduate fellowship are the most familiar means of subsidy. In some instances and institutions the most able students are granted the premium fellowships, which are often outright grants intended to free them from the necessity of teaching or other duties, so that their completion of the doctorate can be expedited. Also where sponsored research is an important aspect of the total graduate effort, many of the best candidates, particularly in the sciences, serve as research assistants and are unavailable for other duties. In these circumstances the least qualified of the graduate students may be left to carry the major share of the undergraduate instructional responsibilities. Another abuse which has been mentioned is the overloading of graduate assistants with teaching responsibilities, or the prolongation of the apprenticeship for several years of subinstructorship, so that progress toward the degree is relatively slow. There seems little doubt that the use of the graduate student as an assistant or apprentice in all aspects of research and instruction can be expected to continue, albeit with some restrictions and safeguards.

The appropriate undergraduate base for an institution offering graduate instruction is a matter of current debate. Most continental European universities are primarily graduate institutions which focus on research and advanced study in a variety of specialties. In the United States, only a few institutions, such as the University of Chicago and The Johns Hopkins University, have graduate programs which are much more extensive than the undergraduate college. The normal pattern appears to be a large undergraduate base in the liberal arts and in professional or preprofessional education, which supports in a variety of ways the admittedly very expensive graduate offerings. The large departments, which can be justified on the basis of the number of students served in an undergraduate program, make possible the coverage of the variety of special fields in any given discipline considered necessary for a viable graduate degree program. The student credit hours generated by the undergraduate program, particularly if large lecture instruction is employed, can be used to justify the assignment of professorial time to small graduate seminars and to the time-consuming function of directing research and theses. To some, this appears an exploitation of the undergraduate program, and to others, a necessary and proper functionalization to meet differing but equally legitimate needs of undergraduate and graduate instruction.

Among the trends in the relationship of undergraduate and graduate education, the following may be noted. As knowledge increases and

the total educational system improves, subjects formerly taught in graduate school become a part of the undergraduate offering, topics formerly a part of college instruction have been introduced into the high school curriculum, and graduate programs become increasingly specialized within disciplines. The combination of the knowledge explosion and the affluent society makes the subsidized postdoctoral year devoted to research increasingly familiar. Some observers describe the withering away of the undergraduate program, which they claim is being absorbed on the one side by secondary schools and on the other by the graduate schools in a closer approach to the continental European pattern. Others, notably the spokesmen for the private undergraduate liberal arts college, stoutly assert the continuing validity of the two-year and four-year undergraduate curricula as appropriately self-contained, and not merely a continuation of high school or a preparation for graduate school. Nevertheless, under the impetus of Federal and state financing of graduate education through grants in support of research activities and facilities, the gap between the foremost institutions and those of the second and third rank is in danger of widening. The most capable, ambitious, and productive faculty members are drawn to graduate centers. Small institutions may be hard put to compete for their proper share of the annual crop of entrants into the teaching ranks of higher education in the face of the attractions of the large universities and graduate centers, as well

as the opportunities in industry and government for continuing original research.

A potentially significant trend in response to the problems of the smaller institutions is the development of consortia. By banding together in confederation, a group of institutions can achieve the necessary "critical mass" for mounting a graduate program beyond the capacities of the institutions operating separately. Similarly, two-year and four-year institutions in the vicinity of a graduate center may be able to establish an association which facilitates faculty staffing both by younger scholars continuing part-time study toward the advanced degree and by established professors who prefer the smaller individual campus but do not wish to be cut off entirely from participation with professional colleagues in a graduate program. Other forces appear to be at work to accentuate the trend toward larger units and systems in higher education.

II.. ADMINISTRATIVE RELATIONSHIPS

Virtually every full-scale account of the current situation with regard to graduate studies addresses itself to the question of the appropriate role and authority of the graduate dean. Three separate patterns appear to emerge both from practice and prescription. The first is that of the graduate dean as a distinguished scholar whose reputation will attract research grants and eager students, and whose personal and professional prestige provides him with an advantage in negotiations with department chairmen and other administrative officers. One such distinguished scholar is alleged to have accepted the appointment only on the condition that he be permitted to discharge his duties on the principle of "calculated neglect."

A second pattern is that of the dean as clerk. There is a considerable body of legend, much of it doubtless well-founded, which suggests that when the dean is a distinguished symbol, the operations of the graduate school are actually in the hands of his secretary and clerical staff. Thus the secretary to a graduate dean can be an extremely powerful if anonymous force in the life of the candidate for an advanced degree. Moreover, a considerable body of opinion holds that the real focus of graduate study is within the department,

and that the office of the dean performs a clerical and service function only. Accordingly, the deanship may be relegated to a minor position in the administrative hierarchy and be staffed by a willing junior colleague or a fading warhorse from the elder faculty.

The obviously increasing importance of graduate instruction as an institutional function leads to the proposal of a third pattern, of a powerful graduate deanship. The officer primarily responsible for graduate instruction may now be a vice president, or a dean with authority and prestige comparable to that of the deans of other colleges and professional schools. Most of the analytical studies[1] note and deplore the fact that the graduate dean is frequently without a separate budget or a separate faculty, and that he is forced into negotiation rather than planning and goal-setting for the graduate program. The questions of the appropriate role and status of the graduate dean are thus far from resolved, but there seems to be a trend in the direction of assigning more authority and more prerogative to this administrative office. The situation is complicated, obviously, by the historical role of the departments and of the department chairmen, that of the autonomous graduate professor, and that of the deans of the professional schools with responsibility for both undergraduate and graduate instruction. The somewhat anomalous position of the graduate dean may be one reason that the position is frequently vacant or filled by an acting dean. The current trend would seem to be to assign

to the graduate dean not only supervision of sponsored research within the institution and distribution of funds available in support of graduate instruction, but also a significant participation in faculty recruitment, promotion and tenure decisions, and other activities with obvious consequence for the graduate program, whether or not there is a separate graduate faculty.

A comparable administrative question concerns the organization within departments to discharge the functions of graduate education. Sometimes the chairman will devote the bulk of his attention to the graduate program, leaving the administration of the undergraduate program to a faculty committee or to junior assistants. Sometimes a faculty committee within the department is the locus of administrative power for the department's graduate program. A department may be divided formally or informally into graduate and undergraduate components. Where a separate graduate faculty exists, the offering or withholding of appointment to this faculty is a matter of great interest and concern to members of the general faculty.

Sometimes, a single curriculum committee reviews graduate and undergraduate offerings alike. More often, however, there is a separate curriculum committee for the graduate school; frequently, it is a subgroup of the graduate faculty, or it may be a university graduate committee. Because of the overlap of graduate and undergraduate

offerings, particularly in newly established programs, or in programs where a number of master's degrees of various kinds are offered with relatively flexible requirements, some system of coordination is required.

III. THE GRADUATE STUDENT

The graduate student body in a modern university in the United States is far from homogeneous. There is a continuing cadre of students pursuing graduate study for an immediate professional goal. Many forces are at work which pour into the graduate schools many students who would not have taken this route even a few years ago. A presumably temporary press is the Selective Service deferment which is allowed for the student who continues his academic enrollment. Some students are frank to admit that their principal motivation for continuing their graduate study is to postpone or avoid military service. However, the perennial student is not a new phenomenon; and, if one can believe what some analysts are saying about students' feelings that the changing world beyond academia is a threat, there may be an increasing number of students for whom graduate study is a haven to be clung to for as long as possible.

The premium placed upon holding an advanced degree for salary and job classification benefits, particularly in the field of education, assures that many students for whom a baccalaureate would once have been sufficient will undertake to complete at a minimum the master's degree. The general escalation of expectation, which tends to set the

baccalaureate degree as a requirement that once could be met by a high school diploma or by a two-year associate degree, has the effect of elevating the requirement from a college diploma to a master's degree and from a master's degree to the doctorate in the ascending hierarchy of job descriptions and expectations.

The laudable ambitions of developing nations, and the desire of the Federal Government and many institutions within the United States to be helpful and supportive to them, increases the flow of foreign students into graduate programs. The language problems they frequently bring with them constitute a special consideration which is not adequately resolved in every graduate school.

With the growth of knowledge and the swift obsolescence of information and skills, graduate schools are called upon for a continuing educational function. Sometimes mature part-time students will be engineers and scientists seeking to upgrade their skills in mathematics and computing techniques; sometimes they may be women preparing to reenter a profession after 10 or 15 years of domestic preoccupation; sometimes they may be merely intelligent citizens with new-found leisure and intellectual curiosity. Such diversity of graduate students demands an equally diverse collection of graduate offerings and, very possibly, the domestication of technological aids such as educational television to the purposes of graduate as well as undergraduate and

noncredit instruction.

While a great deal of attention has been given of late to the quality of undergraduate student life--and normally a panoply of facilities and services are at the disposal of undergraduate students (dormitories, student unions, student counseling, and health services)--the graduate student may be, in matters social rather than academic, the forgotten man. Since most graduate students are at least 21 years old and frequently married, they are presumed to be capable of fending for themselves in the manner of the European university student, with none but academic claims upon the university. Nevertheless, some universities are beginning to provide graduate student dormitories, married student housing primarily for the benefit of graduate students, and to offer graduate students the privileges--and sometimes the concomitant regulations--provided for undergraduate students. Conditions of life for graduate students, sometimes even on the same campus, may range from the well-supported, well-housed, professionally accepted predoctoral or postdoctoral fellow to the lonely, anxious, self-supporting, or minimally subsidized, graduate student. Evidence suggests that the most capable graduate students, particularly in fields of scarce personnel and abundant resources, are courted like star athletes, while less fortunate but only slightly less deserving candidates receive little encouragement.

IV. RIGID OR FLEXIBLE GRADUATE REQUIREMENTS

Foreign Languages

Continuing debate among graduate faculties has centered on the question of the appropriateness of the foreign language requirement for the master's degree and the doctorate. Normally this requirement has been for a reading knowledge of one foreign language, usually French or German for the master's degree, and a reading knowledge of two foreign languages for the doctorate. The reading knowledge requirement is apparently based on a presumption of the use of these languages as a research tool, rather than as evidence of cultural breadth as is the case with the undergraduate liberal arts degree. Given this presumption, it is argued that for many students, a different foreign language, usually Spanish, Russian, or an ancient language, would be more appropriate. It is also argued that the language of mathematics, or that of one of the many computer languages, would be a more effective and more relevant research tool. In any case, the whole question of language requirements is under serious review.

The Dissertation

The German origins of the Ph.D. in the United States are evident

is the extent to which research culminating in a dissertation that makes an original contribution to knowledge is a crucial requisite for the doctorate. This requirement is frequently deplored and responsibly accused as a wasteful and fruitless endeavor, as the cause for the multiplication and elevation of scholarly trivia, and as the reason for many worthy candidates balking at finishing their degrees. So it is that some institutions, such as the State University of Iowa, will accept an original novel, a book of poems, or a group of critical essays in lieu of a Germanic dissertation. Practice varies widely in the requirements for the master's degree. In many instances a dissertation is required together with comprehensive examinations, but in others a master's degree is automatically awarded upon the completion of specified course work beyond the baccalaureate.

Residence

Minimum residence requirements are normally invoked to assure that a graduate program for which a degree is sought will have sufficient coherence, consistency, and focus, and not be merely a hodgepodge of disparate offerings from different institutions. However, in graduate as in undergraduate education in this country the mobility of the population is such and the transfer proclivities of students (and of the faculty mentors they may seek to follow) are such that residence requirements sometimes create problems. It is considered normal for a student to take his graduate degree at an institution

different from the grantor of his undergraduate degree, and not at all unusual for him to take his master's degree from one institution and his doctorate from a second. Thus, a minimum of a single academic year is the usual residence requirement, and some programs have no specific residence requirement. It is common practice for a student to complete all of his course requirements on the campus and then leave for full-time employment expecting to complete his dissertation during spare time and holidays. The difficulties of this latter procedure are widely discussed and is the occasion of much concern about the waste of academic talent stalled with the hypothetical A.B.D. (All But Dissertation).

V. GRADUATE DEGREES

For some time the graduate curriculum has come under attack for its presumed irrelevance to the end purpose of the degree. It has been argued that most curricula place a disproportionate emphasis upon research, narrow specialization, and on the particular skills of the discipline rather than on its application. The place of research as central to graduate education has been sharply challenged and stoutly defended. Perhaps ironically, at a time when the doctorate in many fields is not primarily a preparation for teaching, the inclusion of some instruction and supervised experience in teaching is becoming a standard part of the preparation for the doctorate in many areas.

In established tradition the Master of Arts (M.A.) and the Master of Science (M.S.) degrees have generally served in graduate education to parallel the Bachelor of Arts (B.A.) and Bachelor of Science (B.S.) degrees which signify completion of the baccalaureate program. In England the master's is the teaching degree and is taken as denoting genuine competence in a specialized field. In this country, despite efforts to maintain high standards and periodically to "rehabilitate" the master's degree, it appears generally to have lost its status and its consistent significance. Occasionally, it may represent a two-year

or even longer period of postbaccalaureate education replete with rigorous seminars, a culminating comprehensive examination, and a research thesis. In other instances, it may signify no more than two semesters of additional course work beyond the baccalaureate and very little else. Sometimes it is awarded as a "consolation prize" for Ph.D. candidates who have failed in the latter part of their programs, or who are thought to be too limited in capacity to be encouraged to pursue the last stages of work toward the doctorate. A general confusion about both the actual meaning and the appropriate meaning of the master's degree is therefore wholly understandable.

The Ph.D. has traditionally been considered the highest earned degree for academic and scientific personnel. However, both its essential character and its appropriateness have increasingly been challenged. One alternative which has gained wide acceptance is the Doctor of Education (Ed.D.) degree which, with occasional depreciation, is accepted as the appropriate terminal degree not only for educational administration but for teaching in many fields. Because of doubts as to whether a research degree is indeed the appropriate preparation for a teaching career in higher education, and because of the stringencies of the dissertation requirement for the Ph.D., alternative teaching degrees which signify something between the conventional master's and the conventional Ph.D. are the Master of Philosophy (M.Ph.) and the Doctor of Humanities (D.H.) degrees.

Individual universities have introduced degrees such as the Doctor of Social Science at Syracuse University. Whether such alternatives to the Ph.D. will indeed provide a solution to the problems they are intended to solve and whether they will win full acceptance remain "questions."

Professional degrees such as the M.D., D.D.S., D.V.M., L.L.B., and J.D. for medicine and law appear to generate little controversy. However, there is considerable debate as to whether the appropriate terminal degree for a graduate student in the fine arts should be the M.A., the Ph.D., or the Master of Fine Arts (M.F.A.) degree. Similarly, in the field of business, the Ph.D. versus the D.B.A. (Doctor of Business Administration) and the M.A. or M.S. versus the M.B.A. (Master of Business Administration) continue to serve as focuses of lively debate.

The effort to recruit into the elementary and secondary schools more students educated in the liberal arts, and the transformation of many former teachers' colleges into colleges of liberal arts, has lent impetus to graduate programs leading to the Master of Arts in Teaching (M.A.T.). This program, pioneered by Yale and Harvard, undertakes to combine instruction and experience in pedagogy with advanced work in the specialized field complementing and extending undergraduate liberal arts preparation. Such programs are now in effect at a large

number of universities. A corollary need has been identified for employed teachers who are trained and certified in pedagogy and who wish to carry on graduate work in a specialized field for which they find themselves short of the standard prerequisite for the M.A. or M.S. program. A new degree, the Master of Science in Teaching (M.S.T.), offering a composite of upper-level undergraduate and first-level graduate courses in the specialized field, has been devised to meet this need. In all such circumstances, campus controversy is likely to develop over granting graduate credit for an undergraduate course or holding all graduate candidates, regardless of their preparation, to the same rigid set of prerequisites for graduate study in a discipline. The need for flexibility and for standards of relevance is apparent; many problems of philosophy and attitude remain to be resolved before the M.A.T. and M.S.T. programs are fully established and recognized.

VI. NEEDED RESEARCH

An exhaustive inquiry is unnecessary to point out that there are many critical areas in which research is needed in graduate education. In fact, to paraphrase a statement by a well-known writer, so little research has been done in so many areas of graduate and professional education that one can accurately say that the "field has not been touched." In reference to all phases of higher educational research, Nevitt Sanford has said that in some areas there is research of high quality but these areas are narrow in scope and relevance; he maintains that the processes exposed have not been related to processes in other areas and that in some areas of the highest importance for the educational enterprise, almost nothing has been done.[2] This description applies equally well to graduate education, where there is insufficient information because of the lack of sound, coherent systems of theory and, consequently, the lack of theoretically based empirical research. These fundamental deficiencies can and must be remedied. Enumerated below are several areas where research is most needed; some specific suggestions are made, which point out possible directions for such research. It is essential that the widespread need for a variety of concrete data be met.

Organization and Administration

Much more research needs to be focused on the organization and administration of the graduate program in a variety of institutional settings, in the multipurpose university, in the small university, and in the college with limited graduate offerings. Both the actual roles and the proper roles of graduate deans are seen as ranging from clerk to tsar. The locus of power and the control and direction of graduate programs may be with the individual professor, the department, the division, the faculty committee, the graduate faculty, or one of a variety of top administrative officers; or it may be diffused in a variety of ways. Aside from Milton Muelder's lucid account of the proposed reorganization of graduate study at Michigan State, and the consensus in the literature that a graduate dean who often lacks a faculty and a budget is likely to be hamstrung in his efforts to perform his proper function, little in the literature is enlightening as to actual or optimal patterns of organization for the administration of graduate programs.

Graduate Students and Student Life

While the work of Pace and Stern, Nevitt Sanford, and the on-going projects at the Berkeley Center for Research and Development in Higher Education, among others, have examined the characteristics and the styles of life of undergraduates in a variety of institutions, this work needs to be extended and amplified to include graduate

students.[3] The late David Boroff offered in journalistic form some interesting insights into the life of graduate students on some of the great midwestern university campuses, and much has recently been made of the participation of graduate students in the expressions of student discontent at Berkeley and other major universities. However, the graduate student population is evidently various, swiftly growing, and probably rapidly changing. Studies are required to provide better insight into graduate student characteristics, needs, and expectations.[4]

While a number of follow-up studies of undergraduate degree holders have been conducted, research is needed into the career patterns of holders of graduate degrees.[5] Apart from some studies which purport to show that a relatively small number of holders of advanced research degrees actually conduct productive research and publication subsequent to completing their dissertations, little appears to be known of the later careers of various categories of advanced degree holders.

Graduate Programs and the Numbers Game

Many institutions and programs are taking shape and direction on the basis of assumptions regarding future needs for personnel with advanced degrees. Bernard Berelson in 1960 seriously questioned many of these assumptions and suggested that a much smaller number than had been supposed would actually be required. A year later, Oliver

Carmichael sharply challenged the Berelson position and suggested that an acute crisis was indeed developing. Everett Walters in 1965 and Allan Cartter in 1966 came close to restating the Berelson position. Additional research would seem to be required to resolve the still lively controversy.

Further, the whole process of assessing needs for increased production of graduate programs needs refinement. Does, or should, the investment in graduate education follow a curve dictated by society? Do the industrial, scientific, governmental, and educational sectors have differential or special claims? Is the spiraling trend toward higher and higher academic degrees for certain professions and positions to be accepted as inevitable, or should it be countered? What is the relation between the internalized desires of institutions and departments to offer graduate degrees and the actual shortages or increasing demands in many fields? The genesis of graduate programs in typical institutions and the pattern of minimum or preferred degree requirements for employment are eminently worthy of study.

A study of the undergraduate origins of advanced degree holders led to some strongly urged conclusions about the quality of certain institutions and classes of institutions. It is desirable at this time to pursue a similar study to see if the findings can be replicated or whether the vast changes in public and private higher education have caused new patterns to emerge. Similarly, John W. Gustad's study

of the academic origins and influences upon students who enter the teaching profession might well be extended to a study of the influences which direct a student into graduate study or into a particular field. Certain problems of oversupply and undersupply might be addressed in this way, although it is unlikely that colleges in the United States are prepared to countenance arbitrarily controlled access or assignment to particular areas of a discipline.

Distinguished scientists have argued on both sides of the question as to the number of potential scientists in the population. Some insist that all that is required to increase the number of scientists is better training and more access to scientific studies, while others are convinced that diminishing returns would be encountered in any effort to sharply enlarge the number of advanced degree students in science. This important question should be studied.

The Teaching-Research Controversy

While educational conferences and journals, along with the popular press, bristle with discussions of the connection between effective teaching and productive research, credibility appears to depend much more upon the prestige of a spokesman than upon validation by research data. It should be possible to determine the degree to which demonstrably effective teaching is supported by or antithetical to serious research activity. Differences among fields and disciplines in this

respect are likely, but the matter should be investigated. Particularly in the area of graduate study, teaching by and through research is so common that conventional measures of "teaching load" may be meaningless or at the least misleading. Several kinds of research could illuminate this question.

Teaching and Learning Methods

In graduate education, as in undergraduate education, there is a pressing need for imaginative and searching research into the relative effectiveness of rival methods of teaching and learning. Application of technology, through programmed learning, computer-aided instruction, and other innovations, both imminent and overdue, requires testing and investigation.

The Impact of External Influences on Graduate and Professional Education

Empirical research to determine what kinds of influences are operating to shape higher education today is meager. This research gap is not consonant with the increasing recognition of and concern for the effects of a host of forces on American graduate education. These determining forces, agreed by most writers to be operative, have not been clearly identified and categorized; nor has any relevant or comprehensive investigation been made to uncover their extent and impact.[6] Much of what is written on this topic--as is the case unfortunately with much of the literature on higher education--is

reflection, speculation, opinion, and comment, and rarely does it take the form of a systematic study; however, there are some significant exceptions.[7]

The authors of sources reviewed for this report divide their attentions among several general categories: currently developing Federal relationships with higher education and their consequences, emerging cooperative organizational patterns, statewide planning and coordination, standards and accreditation, professional organizations and other organized special interest groups, foundation support, and autonomy vs. control. Included in these separate concerns are certainly the most obvious and visible forces affecting higher education. But precisely how these forces are affecting higher education is difficult to assess, and few attempts at discovery are being made. Neither are the effects of more subtle forces being determined because, here also, no explicit data have been generated. Only the idea that there exist numerous forces emanating from all levels of the society has been postulated and superficially explored. In addition, research techniques for assessing the variable and possible influences have not been devised.

It is not too bold a suggestion to indicate that much of graduate education would be enhanced and made both more interesting and more productive if research efforts were turned inward rather than to have

research consistently apply to everything except the process of education itself.

FOOTNOTES

1. See Bernard Berelson, Graduate Education in the United States. New York, McGraw-Hill, 1960.

2. Nevitt Sanford, ed., The American College: A Psychological and Social Interpretation of Higher Learning, p. 25. New York, John Wiley, 1962.

3. The quality of the life of medical students has received some attention in recent years. For example, see Helen H. Gee and Robert J. Glaser, The Ecology of the Medical Student. Evanston, Ill., Association of American Medical Colleges, 1958. Robert K. Merton and others, The Student Physician: Introductory Studies in the Sociology of Medical Education. Cambridge, Mass., Harvard University Press, 1957. Howard S. Becker and others, Boys in White. Chicago, University of Chicago Press, 1961. Paul Heist reviews his own work and that of others on legal, medical, dental, and engineering students in Nelson B. Henry, ed., Education for the Professions: 61st Yearbook of the National Society for the Study of Education. Part 2, "The Student," p. 211-34.

4. For the most recent review of student studies, see George D. Yonge, "Students." Review of Educational Research, vol. 35, No. 4, p. 253-63. October, 1965. Also see T. R. McConnell and Paul Heist, "The Diverse College Student Population." In Sanford, ed., op. cit., p. 225-52. For a review of studies of college and university environments, see William B. Michael and Ernest L. Boyer, "Campus Environment." Review of Educational Research, vol. 35, No. 4, p. 264-76. October, 1965. See also Terry F. Lunsford, ed., The Study of Campus Cultures. Boulder, Colo., Western Interstate Commission for Higher Education, 1963.

5. Two examples of this are H. Glenn Ludlow, The Doctorate in Education: A Further Investigation of Persons Receiving the Doctorate in the Field of Education in the U. S. in the Year 1958. Washington, American Association of Colleges for Teacher Education, 1964. William W. Cooley, Career Development of Scientists. Cambridge, Mass., Graduate School of Education, Harvard University, 1963.

6. Such a series of investigations has been undertaken with secondary education as their focus. See Roald F. Campbell and Robert A. Bunnell, Nationalizing Influences on Secondary Education. Chicago, University of Chicago Press, 1963.

7. See ibid. Also see the on-going studies of the Brookings Institution. In addition, Professor Burton Clark, now of Yale and formerly of the Center for Research and Development in Higher Education at Berkeley, has expressed continuing concern that there is insufficient research in this area. He is presently doing some preliminary work to set up a long-range research project focusing on this topic.

ANNOTATED BIBLIOGRAPHY

This bibliography is only representative of the literature in higher education that is relevant to the subject; it is not an exhaustive listing. In view of the other titles in this literature search series and in light of another project sponsored by the U. S. Office of Education which focuses on a comprehensive compilation and review of the literature on this same topic (see Ann Heiss, Center for Research and Development in Higher Education, Berkeley, California--in preparation), the authors decided to cite and review only those source materials directly pertaining to and substantiating the text portion of this volume. Also no attempt was made in the text to focus on the recurring issues related to any one particular professional area, because this aspect of post baccalaureate training is also the subject of a separate monograph in this series (see Milton Horowitz, Trends and Developments in Professional Education). These facts are reflected in the following bibliography.

A. Higher Education--General

1. Brown, Hugh S., and Lewis B. Mayhew, American Higher Education. New York, Center for Applied Research in Education, 1965.

As considered by the authors of this overview, American higher education is a social institution, and, as such, institutions of higher education are the creation of their supporting constituencies and are designed to accomplish socially desired ends. Pursuing this thesis, they conclude that the present forms of higher education have emerged out of earlier forms as the institutions responded to and attempted to cope with new social imperatives. The authors' attempt to place the continuing evolution of institutions of higher education in the context of the ebb and flow of societal needs and demands is only partially successful because it is only partially valid; there are other major determinants shaping higher education. Taken as a whole, this is a useful but colorless description of American higher education.

2. Brubacher, John S., Bases for Policy in Higher Education. New York,

McGraw-Hill, 1965.

The reasons why this treatise has been so widely acclaimed become evident at first reading. It is adroitly argued and crisply reasoned, and it is entirely readable despite its weight. The book is predicated on the assumption that there is a need for a comprehensive and systematic statement of philosophic principles on which higher education can be founded and from which policies governing higher education can be developed. Brubacher attempts to set forth such a statement by winnowing and rearranging the major philosophies which lie at the "base of the educational practice and policy." This is a much needed reaction to a state of affairs in which it is rare that an administrator is able to act on the basis of any well-considered and consciously developed philosophy of higher education.

3. Devane, William Clyde, Higher Education in Twentieth-Century America. Cambridge, Mass., Harvard University Press, 1965.

The author views American higher education from a historical perspective, concluding that the disarray of the present scene is evidence of abundant life and vigor. The diversity of higher education is aptly illustrated by the author's examples developed from the point of view of the institutions themselves--their characteristics, their development, their teachers, trustees, administrators, and students. For the most part this analysis is lucid and well-documented; occasionally it becomes a recapitulation of well-worn truisms.

4. Kerr, Clark, The Uses of the University. Cambridge, Mass., Harvard University Press, 1963.

In this provocative and widely reviewed series of lectures, Kerr describes what he believes higher education has become: an immensely complex, multifaceted, multidirectional, multipurpose institution of infinite variety, with fractionalized power and ill-defined boundaries. Although many have attributed to Kerr the position of advocating higher education as he portrays it, he is actually sketching the realities as he views them and does not necessarily agree with all of what he sees. Admittedly one is left with the impression that Kerr believes that the many benefits of the multiversity outweigh the dysfunctions. The multiversity affects many people in many different ways and in turn is affected by many influences and forces which contribute to its amorphous character. Some of the questions raised and responded to by Kerr include: How did the multiversity happen? What is its history? How is it governed? What is life like within it? What is its justification? Does it have a future?

5. Perkins, James A., The University in Transition. Princeton, Princeton University Press, 1966.

. This much-heralded monograph contains the author's interpretation of what the modern university is, what it has been, and what it is becoming. Three aspects of knowledge are identified and characterized: its acquisition, its transmission, and its application. Each of these aspects is said to be institutionalized as one of three missions of the modern university: research, teaching, and public service. In this way, as Perkins portrays the historical bases of American higher education, he also neatly relates this growth and development to several crucial and formidable current problems. He states two major themes as the critical problems from which the others stem. Each of these three functions of the university tends to grow cancerously; the problem thus becomes one of inhibiting uncontrolled growth. Second, assuming that American higher education has fully embraced these three subtly and intricately meshed missions and that there are demonstrated organizational strains caused by their inherent interrelatedness, the problem becomes one of making decisions for one of these areas while taking into account the impact of these decisions on the other two areas--otherwise, the integrity of the university is violated.

B. University Administration

6. Corson, John J., "The University--A Contrast in Administrative Process." Public Administration Review, vol. 20, p. 2-9. Winter, 1960.

This article, excerpted from a chapter in the author's Governance of Colleges and Universities, compares the ways by which business firms, governmental agencies, and universities arrive at decisions. The author points up three contrasts in university decision-making. First, he suggests that the college or university staff is less often guided in making decisions by a single or limited number of clear and generally understood purposes. Second, he points out that faculty members have divergent interests and loyalties, which complicate the university's decision-making process. According to the author, this commitment to discipline before institution results in conflicts over courses, curriculum, and budgets. Third, the author believes that less authority and responsibility resides with the chief executive and the governing board in education than in other organizations.

7. Litchfield, Edward H., "Organization in Large American Universities:

The Administration." Journal of Higher Education, vol. 30, p. 489-504. December, 1959.

The author's main thesis is that there are general organizational and administrative principles which can and should be applied to academic administration. He attempts to generalize certain functions of administration because of his firm belief that university administration can never be understood fully unless academicians "look to institutions beyond the campus which may have relevant experiences to share . . . ."

8. _____, "The Role of the Academic Disciplines in a Modern University." Address delivered at University of Pittsburgh, December 16, 1958.

This cogent address, delivered by the author while he was chancellor of the University of Pittsburgh, advances the thesis that higher education must not only recognize the central integrating position of the academic disciplines, but must establish an organizational pattern commensurate with such recognition. The author summarizes several patterns of relationships currently employed in universities vis-a-vis the academic disciplines and the graduate and professional schools.

9. Lorish, Robert E., "The Politics of Curriculum Revision." Journal of General Education, vol. 17, p. 273-86. January, 1966.

In a crisp, no-nonsense manner, this article astutely describes the decisional setting of the university, thereby underscoring the complexities of the university decision-making process. The author defines this setting as including the total complex of elements that describes the decisional situation, such as the nature of the problem itself, the organization of the decision-making apparatus, the personnel involved, and the factor of time. These and other elements are described by Lorish as affecting both the nature and possibility of decision. He maintains that the translation of a desired objective into reality within the decisional context of the modern university is no small task: and he illustrates this by focusing on the objective of curriculum revision. He dispels academic myths by demonstrating that decisions are rarely unanimous or spontaneous, but in some way and to some degree they arrived at by an engineering of consent. He counsels that the effective administrator must therefore be prepared to engineer consent. This article represents a sensitivity to the political aspects of higher education not often apparent in articles dealing with similar topics.

10. Lunsford, Terry F., ed., The Study of Academic Administration. Boulder, Colo, Western Interstate Commission for Higher Education, 1963.

This is a collection of papers presented at the 1963 WICHE Institute at Berkeley. The primary thrust of these lectures is toward both systematic theorizing about academic administration and empirical studies of it. The several authors recognize and emphasize that the unique organizational characteristics of the college or university require special considerations both in the formulation of a conceptual framework and in the design of research.

11. Millett, John D., The Academic Community: An Essay on Organization. New York, McGraw-Hill, 1962.

The underlying theme of this work is that because of the substantial differences among organizations, the theoretical concepts and organizational principles which are used in business and public administration cannot be applied in their entirety and automatically to the operations of the academic organization. The author believes that the organizational similarities of colleges and universities to other institutions are only superficial.

12. Muelder, Milton E., ed., The System of Administration of Graduate Studies at Michigan State University. East Lansing, Office of Research Development and Graduate School, Michigan State University, 1962.

The role and importance of administration in graduate studies at Michigan State University is discussed within the context of the growth of graduate studies throughout the United States and at the university. The topics examined include the choices of administrative systems, the implications of the rapid growth of new knowledge, basic policies established by the Michigan State University Senate, the impact and significance of the total efforts and direction of the university, and continuing queries which the university should put to itself. This insightful monograph addresses the question, "What is the minimum administration necessary to accomplish what needs to be done, and what should be the character of this administration?" The author makes a distinction between direct and indirect administration. He explains that in its simplest terms direct administration is immediate responsibility to perform certain assigned or implied tasks; indirect administration is the performance of certain tasks through the services of others, with delegation of responsibility and authority. This is a sensible, sensitive, and inviting approach to self-analysis. Whether it is generally applicable and whether it

is a more idealistic than realistic appraisal are questions for debate.

13. Thompson, James E., ed., Approaches to Organizational Design. Pittsburgh, University of Pittsburgh Press, 1966.

In the introductory chapter of this book, Ralph Stogdill makes two telling points. First, he writes that students of organization are presently confronted with a situation in which fragments of theory are presented as a complete theory. Second, it is a situation in which concepts and problems regarded as important in the study of organizations are determined in part by the view or combination of views held by the theorist, in part by the philosophical and professional schools to which he subscribes, and in part by the individual conceptualizations he wishes to advance. These descriptive statements of the current status of organizational theory lead Stogdill to assert the need for a synthesis. Attempts to derive such a synthesis constitute the focus of this first chapter and set the tone for the rest of the volume. This book is included here not because of any direct relevance to the study of graduate education, but because it is a useful reminder of the pressing need of a conceptual framework "either for thinking systematically about college organization and administration or for drawing a coherent set of hypotheses for investigation."

C. Graduate Education

14. Berelson, Bernard, Graduate Education in the United States. New York, McGraw-Hill, 1960.

This highly praised and widely known study is the foremost piece of research concerned with graduate education; it remains the best-designed, most thoroughgoing and comprehensive study of its kind. The most prevalent and crucial issues, controversies, and current dissatisfactions of present-day graduate education are forthrightly presented and supported or denied by concrete data. In the last chapter, the author lists his several recommendations, each of which has stimulated scholarly thought and extensive debate.

Berelson states his 19 recommendations under the following headings: (1) programs, where he urges the enforcement of the four-year doctorate, the abbreviation of the dissertation, the regularizing of postdoctoral work, the leaving of the foreign language requirements to the departments, and the elimination of the oral defense of the

the dissertation; (2) support and completion, where he advocates student self-support, the active encouragement of ABD's to complete their work, and the provision of more support from industry; (3) students, where he recommends the active and systematic recruitment of graduate students and the establishment of informal social centers; (4) college teaching„ where he recommends differential handling of teacher training, teaching by all doctoral candidates, and the introduction of a new intermediate degree; (5) institutions, where he cites the need for the improvement of relations between the graduate schools and the colleges; (6) administration and organization, where he recommends strengthening the office of the graduate dean as well as the National Organization of Graduate Schools; and (7) conception and evaluation, where he recommends a systematic review of graduate programs by graduate faculties, by the departments, and by the institution.

15. Carmichael, Oliver C., Graduate Education: A Critique and a Program, New York, Harper and Bros., 1961.

This work is based on visits to 40 universities over a two-year period. The author is sharply critical of the present administrative structures of American graduate schools, the ways in which the graduate schools are related to the undergraduate and professional schools, the lack of effective articulation between the colleges and the graduate schools, the failure of the graduate schools to assume a vitally needed leadership role in American education, the specifics of graduate programs and degree requirements, and the failure of the graduate schools to provide sufficient numbers of college teachers. On the positive side, the author makes a series of proposals which he believes will provide the impetus and the means for improving the current situation which he deplores. Included among Carmichael's recommendations are the following: a seven-year integrated program leading from high school graduation to the Ph.D., wherein the freshman and sophomore years become pre-graduate education, and research, writing, independent reading and other educational approaches characteristic of the graduate level begin in the junior year; a doctoral teaching degree; theses and dissertations which focus on ideas and ideals, not on fact-finding; and the active encouragement and recruitment of college teachers beginning in the freshman year. Carmichael's general dissatisfaction with graduate education as it presently exists opposes Berelson's view that, on the whole, graduate education is accommodating the needs of this country.

16. Cartter, Allan M., An Assessment of Quality in Graduate Education, Washington, American Council on Education, 1966.

The major objectives of this study are the appraisal of certain programs in American graduate schools, the updating of data, and the critical examination of available techniques of evaluation. The study purports to be a survey of the informed opinions of a panel of experts numbering more than 4,000 scholars from more than 100 institutions. There are four major conclusions of the study. (1) A survey based on the opinions of well-informed scholars within the academic community is as reliable a guide as one can devise in attempting to measure quality. (2) Departmental strength is directly associated with quantity of publication, performance, and with academic salaries in the upper two professional ranks. (3) Divisional strength correlates closely with certain objective indices. (4) Overall university strength is closely associated with university salary levels and library resources. This most recent and comprehensive study of its kind has provoked considerable interest and debate.

17. Grigg, Charles M., Graduate Education, New York, Center for Applied Research in Education, 1965.

The author critically reviews several of the traditional areas of contention in graduate education. He succeeds fairly well in summarizing and surveying such subjects as the dissertation, the place of the master's degree, the organization of the graduate school and its relationship to the college of arts and sciences, and the relationship between research and teaching. Aside from these highlights, his contribution is neither penetrating nor original.

18. Keniston, Hayward, Graduate Study and Research in the Arts and Sciences at the University of Pennsylvania, Philadelphia, University of Pennsylvania Press, 1959.

The objective of this study was to assess the strengths and needs of graduate education at the University of Pennsylvania as these compare with graduate programs in 25 other supposedly similar institutions. The author consulted with department chairmen in these institutions and asked them to rate the strongest departments in their fields. The findings are listed in an appendix. Keniston's study received a good deal of attention and stirred up much debate because of the alleged limitations of its methods and the possible built-in biases of the sample.

19. Select Committee on Education, Education at Berkeley, Berkeley, University of California, March, 1966.

Of special interest in the present context is Chapter 10 of this report entitled "Graduate Education." The introduction of this chapter

offers reasons for believing that the structure and content of graduate training (at Berkeley) are in need of reexamination. The committee then makes several recommendations with special reference to graduate education at Berkeley. These recommendations refer to problem areas identified by the committee: the meaning of specialization, the departmental programs, interdisciplinary courses, and teaching as graduate study.

20. Walters, Everett, ed., Graduate Education Today. Washington, American Council on Education, 1965.

This series of essays has been lauded as an especially lucid and comprehensive account of the major features and concerns in graduate education--concerns shared by professional educators and laymen alike. The several authors fuse a descriptive with an analytic approach, and the result is generally satisfactory. Their consensus, as stated in the concluding essay, is that no severe shortage of Ph.D.'s is likely in the foreseeable future because the production of Ph.D.'s will increase. Although the authors believe the forthcoming expansion in graduate education will raise (or further complicate) many problems concerning admissions, fellowship needs, faculty requirements, an imbalance in support of educational programs--not to mention the physical problems of providing university facilities, equipment, and housing for a greatly expanded graduate student population two decades hence--their collective outlook toward graduate education today is generally optimistic.

D. The Relationship of Graduate to Undergraduate Programs

21. Bailey, Nathan A., "The Relationship of Graduate to Undergraduate Education in Business Administration." In John J. Clark and Blaise J. Opulente, eds., Professional Education for Business, Jamaica, N. Y., St. Johns University Press, 1964.

Dean Bailey concisely raises many pertinent and crucial questions, which are apparently obvious and therefore often overlooked. He points out that the problems of the relationship of graduate to undergraduate education in business administration are part of a larger series of related and mostly unresolved questions pertaining to career preparation. He adds that there are two opposing and controversial views of graduate education in business: that graduate education is primarily an extension of the undergraduate business program which is its logical and proper foundation; and alternately, that a relationship between graduate and undergraduate business education is neither

necessary nor desirable. The author justifies the undergraduate portion of business education, and then addresses himself to another fundamental question, "What is graduate education and how does it differ from undergraduate education?"

22. Clark, John J., and Blaise J. Opulente, eds., Business and Liberal Arts. Jamaica, N. Y., St. Johns University Press, 1962.

The several authors of this work set forth a number of guidelines which they suggest can be used as the basis for a meaningful blending of the liberal arts and sciences with the professional business curriculum. The editors predict that in the near future the curriculum of the business school will assume a definite management orientation which will reflect a variety of efforts to apply the theoretical and empirical materials of the behavioral sciences.

23. Dressel, Paul L., Lewis B. Mayhew, and Earl J. McGrath, The Liberal Arts as Viewed by Faculty Members in Professional Schools. New York, Teachers College, Columbia University, 1959.

This is an inventory of the attitudes and opinions of faculty members in a number of technical and professional colleges concerning liberal arts courses and requirements. This study attempts to determine the general favorableness or unfavorableness of these faculty members toward the liberal arts portion of the curriculum. The authors conclude that the data represent a widespread endorsement of the idea that specialized subject matter of technical and professional curricula should be considerably undergirded by the studies customarily found in liberal arts colleges. This is another variation of the thesis actively fostered by McGrath and his colleagues at Columbia in their prolific writings.

24. Gordon, Robert Aaron, and James Edwin Howell, Higher Education for Business. New York, Columbia University Press, 1959.

This is a report of the results of a study sponsored by the Ford Foundation on business education at the collegiate level. While this detailed and comprehensive work encompasses both undergraduate and graduate business education, of special concern in the present context are Chapters 11 and 17, both of which deal specifically with issues pertaining to graduate programs. One issue explored is that of the nature of the degree. Because of uncertainties as to how much graduate training should be expanded and as to the kinds of careers which should be emphasized, most schools have not yet decided whether the master's degree in business should be considered a graduate or a professional degree. Identified as another issue is the

question concerned with determining the best kind of undergraduate preparation for postbaccalaureate training in business. The authors describe and analyze a variety of existing business programs and conclude that it is best to defer business education to the graduate level.

25. McGrath, Earl J., Are Liberal Arts Colleges Becoming Professional Schools? New York, Teachers College, Columbia University, 1958.

In this monograph, McGrath revives the question of the proper balance between professional and liberal education. He believes that the partisan advocates of either one of these types of education would be well-advised to modify their positions in the light of historical developments and the present circumstances in American higher education. As McGrath sees it, the facts reveal that both objectives have become conspicuously permanent features of all types of higher education.

26. _____, The Graduate School and the Decline of Liberal Education. New York, Bureau of Publications, Teachers College, Columbia University, 1959.

McGrath pursues his favorite thesis that the liberal arts colleges are failing to perform their proper mission, that is, providing broad general education according to the specific criteria he sets forth. Such phrases as "congeries of unrelated courses" and "patternless mosaic" are freely sprinkled throughout this monograph as descriptions of the current curricular disorders in the undergraduate liberal arts college. The author attributes these defects to the ascendancy of graduate education, and he offers a series of justifications for his strongly held opinion. He concludes by recommending six steps toward the reestablishment of the freedom of the liberal arts colleges from dominance by graduate education. The zealous tone and dramatic language reflect the fact that this is a position paper with a single view and purpose.

27. Ness, Frederic W., and Benjamin D. James, Graduate Study in the Liberal Arts College. Washington, Association of American Colleges, 1962.

The expressed purpose of this study is two-fold: to determine both the common and the diverse elements of the graduate curriculum in selected private colleges; and to explore ways and means for improving the quality of these programs. The study fulfills this dual intent. It describes in some detail the programs and the present commentaries on problems confronting them. Throughout this realistic

appraisal of the plight of master's-level programs is woven the earnest hope that a continuing assessment and resulting improvement can be made. Unfortunately, this familiar refrain has resulted in little real innovation.

28. Trinkhaus, Charles, ed., A Graduate Program in an Undergraduate College: The Sarah Lawrence Experience. Middletown, Conn., Wesleyan University Press, 1956.

This book examines some of the problems involved in establishing and maintaining a graduate program at Sarah Lawrence College. The program is based on the philosophy of individual education and includes what the members of the reporting committee believe are the best features of graduate education: independent research projects, seminars, tutorial instruction, some freedom of choice among fields and subjects, and consideration of the student as an adult.

E. Professional Education

29. Lynn, Kenneth S., ed., The Professions in America. Boston, Houghton Mifflin, 1965.

This series of essays purports to correct what is identified as a generalized lack of knowledge about the professions, their nature, their functions, and the myriad problems confronting them. An attempt is made to define professional behavior, with the admission that there is no consensus as to what this entails. "Professional behavior may be defined in terms of four essential attributes: a high degree of generalized and systematic knowledge; a primary orientation to the community interest rather than to individual self-interest; a high degree of self-control of behavior; and a system of rewards that is primarily a set of symbols of work achievement . . . ." Based on this definition, the university professional school is seen as functioning primarily to transmit to its students a generalized and systematic knowledge that is the basis of professional performance. Briefly, the university professional schools are viewed by these authors as among the primary innovators and systematizers of ideas for their respective professions.

30. McGlothlin, William J., Patterns of Professional Education. New York, G. P. Putnam's Sons, 1960.

This is a straightforward presentation of recurrent and salient problem areas in professional education. A particularly deft summary

of the established patterns of, and issues pertaining to, the relationships between professional schools and other components within universities especially commends Chapter 6.

31. McGrath, Earl J., Liberal Education in the Professions. New York, Bureau of Publications, Teachers College, Columbia University, 1959.

McGrath sharpens the widespread debate over the need for and the possibilities of merging two sets of educational objectives, those of liberal education and those of professional education. This is purportedly a study of the curricula of selected undergraduate professional units in colleges and universities. Nevertheless, these empirical aspects are overshadowed by the bold relief in which the author's thesis stands out on nearly every page: the curriculum of higher education should be an integral whole, which includes a careful blending of both liberal and professional ingredients. Aside from this insistent advocacy, the thesis clearly has merit.

32. National Society for the Study of Education, Education for the Professions. 61st Yearbook, Part 2, Nelson B. Henry, ed., Chicago, University of Chicago Press, 1962.

This N.S.S.E. Yearbook is both penetrating and comprehensive in its treatment of perplexities common to all areas of education for the professions. The problems synopsized by G. Lester Anderson in the first chapter and amplified in later chapters by the several authors include: problems of purpose, identity, standards, evaluation, and reform; problems of relations--with universities, society, the liberal arts, with other professions, and with the subprofessions; problems of uniqueness and autonomy on one hand and cooperativeness and shared responsibility on the other; problems of stability within a process of change; problems of quality compromised by expanding demands for service; problems of maintaining a supply of professionals from a limited pool of talent; and finally the problem of continuous refreshment of those in service. This informative compilation of essays is basic reading for students of higher education.

33. Stone, James C., and Clark N. Robinson, The Graduate Internship Program in Teacher Education: The First Six Years. Berkeley, University of California Press, 1965.

This is an account of the development of the University of California graduate internship teacher education program, established at Berkeley in 1956. The report cites five elements which are considered by the authors to be essential to this kind of program: (1) a four-year

liberal arts degree program with professional study reserved for the fifth year; (2) integration of theory and practice in a professional curriculum which embodies cooperation between institution and school district; (3) a team or "package" approach to teaching and supervision throughout the entire professional sequence; (4) a reorganization of professional content along some other basis than compartmentalization of separate courses taught by separate instructors; and (5) high academic, personal, and professional standards for admission to and retention in the program. The authors attribute the continuing success of this internship program to the incorporation of these elements in the program. The fundamental principle on which the program is based is that neither teaching experience nor related professional content, alone, is adequate as a curriculum; practice and theory are shown to be successfully interwoven and interrelated.

F. The Graduate and Professional Student

34. Heard, Alexander, The Lost Years in Graduate Education. Atlanta, Southern Regional Education Board, 1963.

This monograph examines the factors which determine the amount of time required to earn the doctorate. As described in the study, three of the more general determinants are the lack of clarity of purpose prior to a student's entering graduate study and after his entering it; the lack of coordination and continuity in the content of degree programs; and the lack of financial help. Other specific factors believed by the author to increase the amount of lost time and to contribute to the variations in time expended are examined under rubrics of personal uncertainty, unstructured freedom, interrupted study, differences among the disciplines, and differences in program coordination. This study tidily and objectively reveals the uncertainties and frustrations of graduate students pursuing the doctorate. Implicit throughout is the crucial question, "Are these precarious conditions of graduate life an integral and valuable component of the program, or are they nonessential derivatives of a wasteful and ossified system of graduate education?" The author's response to this legitimate and necessary question is clear: improvements must be made to organize doctoral work in such a way as to avoid the now "disjointed, dilatory, and wasteful sequence of studies."

35. Merton, Robert K., George G. Reader, and Patricia L. Kendall, The Student-Physician: Introductory Studies in the Sociology of Medical Education. Cambridge, Mass., Harvard University Press, 1957.

Since the college student is the central figure in education, it is ironical that only in this decade has he become the focus of serious and widespread research efforts. The current concern with the student and the effect of the educative process on him is superbly exemplified by the Student-Physician, which focuses upon the ways in which the social structure of medical school "largely forms the behaviors of its members and so affects the making of the medical man." The expressed aim of this study is to determine how the student becomes a socially certified physician, "outfitted with a definition of his professional status . . ., with a self-image . . ., and with a set of professional values . . . ." This work effectively combines a psychological and a sociological approach which relates the variability of individuals and the variability of a social environment.

G. The Impact of External Influences on Graduate and Professional Education.

36. Babbidge, Homer D., and R. M. Rosenzweig, The Federal Interest in Higher Education. New York, McGraw-Hill, 1962.

This discerning report illuminates the complex and confusing web of relationships and the maze of supportive systems of organization which both the Federal Government and higher education have devised in their dealings with one another. The authors assume a double perspective which allows them to examine in depth the manner and the reasons for development of such a variety of organizational arrangements. To the critics of governmental red tape, the authors assert that complex structure and bureaucratic operation are not exclusive properties of the Federal Government: "probably no other segment of American Society has so many organizations and is yet so unorganized as higher education." The authors communicate clearly and vividly a sense of process in governmental activities, a sense of the government's delicate balances, a sensitive appreciation of the political nature of governmental organization and program, and a keen knowledge of the working of academia.

37. Brumbaugh, A. J., State-Wide Planning and Coordination. Atlanta, Southern Regional Education Board, 1963.

This pamphlet is a useful abbreviated outline of requirements for statewide planning. It assumes that a state must adopt a formal approach to statewide planning and coordination to achieve excellence and to gain the highest possible return for every dollar invested in higher education.

38. Chambers, M. M., Freedom and Repression in Higher Education. Bloomington, Ind., Bloomcraft Press, 1965.

This work offers a rebuttal of that portion of the thesis expounded by Conant in his book, Shaping Educational Policy, which relates to the organization and support of American public higher education. Stated briefly, Conant's thesis is that there is a need on a statewide, regional, and national level for more order, planning, and coordination than now exists in higher education. Chambers adamantly opposes this point of view by arguing that the benefits derived from the unstructured, widely diverse, and flexible character of American higher education far outweigh those of a highly organized and nationally or regionally controlled system of higher education such as that prescribed by Conant. Chambers is doubtless over-reacting to Conant's overstatement. Chambers is surely correct in his assertion that the rich diversity of American higher education is highly desirable; he is less convincing in his assumption that this diversity would be sharply curtailed with the introduction of more widespread and insistent coordination. Conant is difficult to challenge in his belief that, given the present environment, there is a need for really effective planning and coordination; his assumption that the disorder and variety discernible in higher education today is totally negative is surely debatable. In their advocacy, these authors give little attention to the possibility of devising an approach to coordination and cooperation involving the state, region, or nation, which would not sacrifice but would rather enhance and sustain the unique pluralism of American higher education. Their critics argue that the continued maintenance of this valued pluralism will depend largely on how inventive we are in this regard.

39. _____, Voluntary State-Wide Coordination in Public Higher Education. Ann Arbor, University of Michigan, 1961.

The author makes a favorable evaluation of the work of voluntary coordinating agencies, speaking strongly against what he calls the coercion of formal coordinating boards. He admits, however, that it would be impossible to secure conclusive evidence of the superiority of voluntary coordination.

40. Gardner, John W., "Government and the Universities." In Wilson, ed., Emerging Patterns in American Higher Education, p. 286-92.

The author points to the changing nature of governmental-university relationships, which he asserts are only a part of the larger, far-reaching, and profoundly significant evolution occuring in the relationship between the governmental and nongovernmental sectors of society.

In view of these newly forming partnerships which cut across old categories, Gardner urges both government and university officials to become better informed of each other's situation. Each should foster a mutual understanding of the other; each should become exceedingly knowing about the other. Only then, according to the author, will universities have some measure of control over their own destiny which they now lack.

41. Glenny, Lyman A., Autonomy of Public Colleges: The Challenge of Coordination. New York, McGraw-Hill, 1959.

This study, sponsored by the Carnegie Corporation and undertaken at the then Center for the Study of Higher Education at Berkeley, remains the best single source available on this topic. The purpose of the study was to provide data, information, comparisons, and evaluations which can be used by those interested in the coordination of higher education. Glenny proceeded on the following four basic assumptions: diversification of educational opportunity is desirable; a measure of freedom and initiative of individual institutions within each state benefits education; an ideal administrative model for state coordination is not known at present; and some kind and degree of coordination of public institutions is desirable and inevitable.

42. McConnell, T. R., A General Pattern for American Public Higher Education. New York, McGraw-Hill, 1962.

The author cogently points out that the literature on statewide coordination is meager indeed. He states that students of higher education and of public administration have almost wholly neglected to describe, much less evaluate, the organization and operation of coordinating agencies. This work centers on the following questions: "What division of labor among colleges and universities would be economical and productive?" "What pattern of institutions, especially public institutions, will best serve our needs?" "How can the efforts of public colleges and universities in a state be effectively coordinated?" This is a searching inquiry into a topic of profound interest, and it merits careful reading regardless of one's point of view on these issues.

43. Martorana, S. V., and Ernest V. Hollis, State Boards Responsible for Higher Education. Washington, U. S. Office of Education, 1960.

This study is confined to state boards responsible for public institutions of higher education, including junior colleges. The characteristics of each board, its scope of responsibility, and the number and types of institutions under its jurisdiction are included;

also examined are the size of boards, their selection of members, their meeting procedures, and their central office staffs. The primary conclusion is that coordination encompassed in a single statewide board is developing at an accelerated rate, as is evidenced by the proximity of dates of creation for this type of board and the increasing number of such boards.

44. Mayor, John R., Accreditation in Teacher Education: Its Influence on Higher Education, Washington, National Commission on Accrediting, 1965.

This report is an analysis of accreditation of teacher education on the national, regional, and state levels. The author concludes that graduate work differs sufficiently enough from work on the undergraduate level to make it desirable that a different set of standards and procedures be used for accreditation of graduate programs. This conclusion is the basis for a recommended plan of graduate accreditation which, according to the author, would recognize the special and peculiar status of graduate programs. Features of this plan are proposals that standards and procedures should be formulated jointly by the Council of Graduate Schools, the Federation of Regional Accrediting Commissions of Higher Education, and the national agency in teacher education responsible for development of standards for the accreditation in its area. It is also proposed that, whenever possible, persons involved in evaluating graduate programs for accreditation should be selected from a panel of evaluators named by the Council of Graduate Schools.

45. Moos, Malcolm, and Francis E. Rourke, The Campus and the State, Baltimore, Johns Hopkins Press, 1959.

This study was financed by the Fund for the Advancement of Education of the Ford Foundation. The authors present some of the present-day problems involving the control and direction of higher education, both public and private, by noneducational departments and agencies of state government. The data for this project were obtained by interviewing educators and state government officials throughout the country.

46. Orlans, Harold, The Effects of Federal Programs on Higher Education: A Study of Thirty-Six Universities and Colleges, Washington, Brookings Institution, 1962.

This study has become one of the most widely known and authoritative single works on the protean topic of effects of Federal programs on higher education. It focuses on three questions. First, what

have been the effects of Federal programs upon the quality of higher education, particularly at the undergraduate level? Second, to what extent can, or should, fuller use be made of institutions not now heavily involved in Federal programs? Third, what has been the experience of institutions with the administration of Federal programs? The study examines a sample of three types of institutions and three types of liberal arts disciplines, which the author indicates have been chosen for their importance and the range of educational situations exemplified rather than for their statistical representativeness. The author concludes that the direct effects of Federal programs have been profound and beneficial in the sciences, noticeable but more imbalanced in the social sciences, and negligible in the humanities. The heavy concentration of Federal research and development funds at a few major installations should be continued; but a greater effort is warranted to extend other programs of scientific research and education below the doctoral level to more institutions which do not now participate extensively. Government programs have developed along two administrative lines: the project system, in which funds are controlled by individual faculty for designated purposes; and various forms of aid for broader purposes, in which funds are controlled by alliances of faculty or by higher administrative offices. Orlans has made a seminal contribution toward understanding a most complex subject.

47. Perkins, James A., "New Conditions of Autonomy." In Wilson, ed., Emerging Patterns in American Higher Education, p. 8-17.

Perkins depicts a host of forces emanating from inside and outside universities and colleges, and he maintains that these forces affect, challenge, and impinge on the viability of an autonomous system of American higher education to such an extent that a redefinition of the term "autonomy" is required. However, despite these myriad forces, of which growth is the most basic and influential, Perkins asserts that university autonomy, as he newly defines it, is a "precious asset" which "has its strongest case in its role as the great protector of intellectual freedom." The case for the autonomous university--that is, within the delimiting framework of these new conditions of autonomy--rests equally upon the continuance of the university as a major initiating and innovative force and upon the capacity of the university to demonstrate and persuade that only through an appropriate measure of autonomy can a responsible balance of its interests with those of the larger public be achieved. This eloquent essay places much of the burden on higher education: within certain recognizable and justifiable constraints, higher education must take the initiative to see that its capacity for self-determination is not eroded.

48. Rivlin, Alice M., The Role of the Federal Government in Financing

Higher Education, Washington, Brookings Institution, 1961.

There are two expressed purposes of this study: first, to trace the history of Federal concern with higher education; and second, to raise and discuss fundamental questions about the future role of the Federal Government in financing higher education. The issues are presented as not only intrinsically important, but doubly significant when viewed in the light of higher education's vital role in bolstering the nation's economic and military strength. The author examines alternative programs and conflicting points of view on aid to higher education in an effort to determine the appropriate role of the Federal Government. She concludes that the Federal Government should plan to increase substantially its support of higher education, and that Federal monies should be directed toward support of instructional functions and construction of facilities as well as toward research. Additionally, she maintains that research funds should not be used to cover deficits in institutional budgets for instruction. The materials are pertinent and well-presented.

49. Wilson, Logan, "Myths and Realities of Institutional Independence." In Wilson, ed., Emerging Patterns in American Higher Education, p. 18-28. Washington, American Council on Education, 1965.

In this concentrated essay, the author argues that universities constitute one set of institutions in a complex, interwoven, multi-institutional society. This observation may seem too evident to need expression, but as it is stated here it effectively sets higher education in a broad societal context and thereby provides essential perspective. Further, there are no longer precise boundaries separating these many institutions, all of which become enmeshed in an enlarged web of interrelationships. A corollary to the second point is that this mutual and multilateral involvement inescapably includes the potential of compromised integrity and independence. Confronted with this potential for erosion of their autonomy, the task of the university becomes clear: a continuing assessment must be made to differentiate between the realities and the fictions of institutional autonomy. Given this evaluation, universities can then work to achieve and maintain the delicate equilibrium between relative freedom and total infringement on their jurisdictions.

REACTIONS

In order for this second series of "New Dimensions in Higher Education" to better serve the needs of colleges and universities throughout the nation, reader reaction is herewith being sought. In this instance, with respect to Trends and Developments in Graduate Education, the following questions are asked:

1. Can you suggest other reports, experimental programs, or institutional experiences that would add significantly to this report?

2. What problems related to this subject should be given the highest priority, in terms of further research?

3. What can the United States Office of Education do to accelerate improvements and advancements in the nation's graduate schools?

Kindly address reactions to:

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END

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